UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,449	09/20/2003	Chen-Yu Huang	CHA9 2003 0020US1	4525

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EXAMINER
SAINT CYR, LEONARD

ART UNIT	PAPER NUMBER
2626	

NOTIFICATION DATE	DELIVERY MODE
04/15/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _22 February 2010_.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1, 3 -10, 12 -17, 19, and 20_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1, 3 -10, 12 -17, 19, and 20_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on _01/29/04_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _11/25/09, and 03/18/10_.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

02/22/10 has been entered.

Response to Arguments

2.   Applicant's arguments with respect to claims 1, 3 - 9, 11 - 17, 19, and 20 have

been considered but are moot in view of the new ground(s) of rejection.

Applicants argue that Omoigui does not teach a relevant document finder which

automatically, without user intervention, enhances a users keyword query entry with the

semantic node term that identifies the keyword query term in the users keyword query

to create an enhanced keyword query, the enhanced keyword query including both the

keyword query term and the semantic node term (Amendment, pages 11 – 14).

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
set forth the best mode contemplated by the inventor of carrying out his invention.

3.   Claims 9 - 16 rejected under 35 U.S.C. 112, first paragraph, as failing to comply

with the written description requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to reasonably convey to one

skilled in the relevant art that the inventor(s), at the time the application was filed, had

possession of the claimed invention. Program code embodied in at least one computer-

readable storage medium is not described in the specification, since page 4, lines 18 –

25 only recites "The network node servers manage network traffic such as the

communications between any given user's computer and an information server. The

computers I00 are equipped with communications software".

Claim Rejections - 35 USC § 101

4.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

        Claims 1, 3 - 8 are rejected under 35 U.S.C. 101 because the claimed invention

is directed to non-statutory subject matter. Although **claims** 1, 3 - 8 appear to fall within

a statutory category *(i.e., apparatus)*, **claims** 1, 3 - 8 encompass nothing more than

logic/software modules as per the specification *("The network node servers manage

network traffic such as the communications between any given user's computer and an

information server. The computers I00 are equipped with communications software ",

Page 4, lines 18 - 25)*. Thus, **claims** 1, 3 - 8 are directed to non-statutory subject matter

because their scope includes a computer program embodiment, an abstract data

structure which does not fall within one of the four statutory categories *(i.e., it is directed to a program per se)*. See also MPEP § 2106.IV.B.1.a. Data structures not claimed as embodied in computer readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention, which permit the data structure's functionality to be realized. In contrast, a claimed computer readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory. Similarly, computer programs claimed as computer listings *per se*, i.e., the descriptions or expressions of the programs are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized

Claims 9 - 16 are rejected to non-statutory subject matter. Computer programs claimed are neither computer components nor statutory process, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements

of a computer which permit the computer program's functionality to be realized, since page 4, lines 18 – 25 only recites "The network node servers manage network traffic such as the communications between any given user's computer and an information server. The computers I00 are equipped with communications software".

Thus, since a computer program is merely a set of instructions capable of being executed by a computer, the computer program itself is not a process, and non-statutory functional descriptive material. Accordingly, the subject matter of claims 9 – 16 is held to be non-statutory subject matter.

Claims 17, 19, and 20 are rejected under 35 USC 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps to be performed, a statutory process under 35 USC 101 must be tied to another statutory category (such as a manufacture or a machine) or transform underlying subject matter (such as an article or material) to a different state or thing. The steps in those claims can be performed manually without the use of a particular machine. Those claims could be done in a piece of paper, wherein all the steps of the claims are performed by software codes. Thus, claims **17, 19, and 20** do not define a statutory process.

Claim Rejections - 35 USC § 102

5.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6.   Claims 1, 3 - 9, 11 - 17, 19, and 20 are rejected under 35 U.S.C. 102(e) as being

anticipated by Corston et al., (US PAP 6,901,399).

As per claims 1, 9, and 17, Omoigui teaches a self-enhancing search

system/method for automatically providing expanded keyword searches comprising:

a semantic taxonomy containing semantic node terms in a hierarchical structure,

each semantic node term identifying groups of related keywords ("syntactic and

semantic properties inherent to the words in an input...parse tree can be constructed

therefor"; col.12, lines 59 – 64);

a search system text analyzer that periodically looks through a set of documents

for a database and identifies keyword terms used in each of the documents that occur in

the hierarchical structure ["use natural language processing techniques in an attempt to

match the semantic content of a first textual input ...a second textual input (such as

documents being searched)"; col.4, lines 22 – 32] ;

a semantic binder for attaching a textual index to each of the documents in the

set of the documents, the textual index for each of the documents including at least one

semantic node term that identifies keyword terms used in the document ("a semantic

relationship can be precomputed, while a corresponding document is being indexed and

stored..."; paragraph 12, line 60- col.13, line 3);

a relevant document finder which automatically, without user intervention,

enhances a users keyword query entry with the semantic node term that identifies the

keyword query term in the users keyword query to create an enhanced keyword query,

the enhanced keyword query including both the keyword query term and the semantic

node term ("first performing semantic expansion of words in the original logical

form…semantically expanded words, and using the original structured connection in the

original logical form"; col.30, line 38 – col.31, line 17); and

based on the enhanced keyword query locates documents in the set of

documents that contain a match for the keyword query term and documents in the set of

documents that do not contain a match for the keyword query term in the user's

keyword query but contain other keyword search terms that are linked to the keyword

query term by the semantic node term identifying the keyword query term to thereby

increase the number of documents returned to the user ("first performing semantic

expansion of words in the original logical form…semantically expanded words, and

using the original structured connection in the original logical form…this technique tends

to retain relevant documents that are returned based on the query"; col.30, line 38 –

col.31, line 67)

As per claims 3, 11, and 19, Corston et al., further disclose a semantic dictionary

which defines user keyword query terms in user's query in accordance with the

semantic nodes in a semantic dictionary ("a dictionary…in order to identify synonyms,

hypernyms, hyponyms, or other semantic relationships between words";col.30, lines 46

– 59).

As per claims 4, 12, and 20, Corston et al., further disclose a semantic dictionary

builder which systematically examines the system log off line new keyword queries to

increase the terms in the semantic dictionary and associate them with one or more

semantic nodes ("examining each content word in the original logical form...a

dictionary...in order to identify synonyms, hypernyms, hyponyms, or other semantic

relationships between words";col.30, lines 46 – 59).

As per claims 5, and 13, Corston et al., further suggest ranking the results of

searches using the enhanced queries to place terms in the semantic dictionary in order

of most often used keyword query terms to reduce table lookup time (determining the

scores based on similarity and ranking the documents based on highest scores

suggests placing terms in the semantic dictionary in order of most often used keyword

query terms; col.1, lines 65 – 67; col.8, lines 23 - 27).

Claim Rejections - 35 USC § 103

7.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

8.   Claims 6 - 8, 14 - 16 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Corston et al., (US PAP 6,901,399) in view of Omoigui (US PAP 2003/0126136).

        As per claims 6, and 14, Corston et al., further that the semantic dictionary binder

includes:

        a submodule that finds other statistically close terms to the identified keyword

query terms ("score of each such document"; col.1, lines 65 – 67; col.8, lines 23 - 27).

a submodule that finds synonyms and related terms for the identified keyword

query terms, using thesaurus ("a thesaurus, a dictionary…in order to identify synonyms,

hypernyms, hyponyms, or other semantic relationships between words";col.30, lines 46

– 59).

However, Corston et al., do not specifically teach a sub-module that identifies

domain specific terms in a given keyword query, using domain specific glossary; a

submodule that identifies relevant domain specific categories for the identified keyword

terms, using domain specific ontology.

Omoigui discloses the server includes a second server component that hosts

domain-specific information that is used to classify and categorize semantic information.

The first and second server components work together and may be physically

integrated or separate (paragraphs 71, and 258).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to use domain-specific information as taught by Omoigui in

Corston et al., because that would provide better search engine capabilities (paragraph

263, lines 1 – 3).

As per claims 7, and 15, Corston et al., in view of Omoigui further disclose a

submodule that binds keyword queries in the identified semantic taxonomy categories,

using the results of the text analyzer (Omoigui; "ontology and categories corresponding

to taxonomy for each semantic domain … responds to semantic queries"; paragraph

670, lines 8 – 11).

As per claims 8, and 16, Corston et al., in view of Omoigui further disclose a

submodule that adds new doc-query links to the meta-data of the corresponding textual

index entries to link the documents to the semantic node terms in the hierarchical

structure (Omoigui; "adding, removing and updating entries in the semantic metadata

store"; paragraph 248; paragraph 269; paragraph 670, lines 8 – 11; paragraph 582).

Conclusion

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to LEONARD SAINT CYR whose telephone number is

(571) 272-4247. The examiner can normally be reached on Mon- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone

number for the organization where this application or proceeding is assigned is (571)-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at (866)-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or (571)-272-1000.

LS

04/06/10

/Leonard Saint-Cyr/

Examiner, Art Unit 2626